

AMENDMENT

It is respectfully requested that the claims be amended without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, as follows.

In the Specification:

Please amend the Title on page 1, line 1 as follows:

~~TISSUE-ENGINEERING OF THREE DIMENSIONAL VASCULARIZED~~ TISSUE USING
MICROFABRICATED POLYMER ASSEMBLY TECHNOLOGY

Please amend the Abstract on page 58, line 1 as follows:

The invention provides for ~~the~~ translating two-dimensional microfabrication technology into the third dimension. Two-dimensional templates are fabricated using high-resolution molding processes. These templates are then bonded to form three-dimensional scaffold structures with closed lumens. The scaffolds can serve as the template for cell adhesion and growth by cells that are added to the scaffolds through the vessels, holes or pores. These scaffolds can be formed by layering techniques, to interconnect flat template sheets to build up a fully vascularized organ. ~~Alternatively, such scaffolds can be formed by rolling or folding the templates to form thick three-dimensional constructs.~~

~~The scaffolds can serve as the template for cell adhesion and growth by cells that are added to the scaffolds through the vessels, holes or pores. A second set of cells, such as endothelial cells, can also be added to or seeded onto the scaffold. The second set of seeded cells form small dimensioned blood vessels between and through the first set of seeded cells. Once the sets of cells have been added to or seeded onto the three-dimensional scaffold, this tissue-engineered organ is implanted into a recipient.~~